

Application No. 09/965,697  
 Response dated April 7, 2005  
 Reply to Office Action dated January 7, 2005

### REMARKS

Claims 1-20 are pending in this application. The Examiner previously indicated that claims 1-20 are generic to a plurality of disclosed patentably distinct species of multiple inducible gene modulation systems, comprising ligand binding domain, DNA binding domain, and transactivation domain, and Applicants are thus required under 35 U.S.C. § 121 to elect a single disclosed multiple inducible gene modulation system for examination purposes.

### *Summary of Interview*

Applicants and agent appreciate the courtesy shown to them during a telephone interview on March 22, 2005 with Examiner Michael Brannock. During the interview, the Examiner Brannock indicated that Applicant's draft response faxed to him on March 11, 2005 sufficiently described Applicants' elected species and could be used in the official response.

In reply, and solely to be responsive to the Examiner's requirement to elect a single disclosed multiple modulation system, Applicants have provisionally elected, with traverse, Group I, claims 1-4, 9-12 and 16-20, drawn to a multiple inducible gene modulation system as follows:

**Claim 1: Each individually operable gene modulation system comprises:**

	i) A) DBD	i) B) LBD	i) C) AD	ii) Ligand	iii) A exogenous or endogenous pn	iii) B) RE
1 <sup>st</sup> gene modulation system	Gal4	CfEcR (with a substitution mutation)	VP16	Ligand that binds to CfEcR		Gal4 RE
2 <sup>nd</sup> gene modulation system	LexA	CfEcR (with a substitution mutation)	VP16	Ligand that binds to CfEcR		LexA RE

DBD=DNA binding domain

LBD=ligand binding domain

AD=transactivation domain

pn=polynucleotide

RE=response element

**DRAFT**

**Claim 2: The multiple inducible gene expression system, wherein each gene modulation system comprises:**

**a):**

	i) 1 <sup>st</sup> expression cassette			ii) Ligand	iii) 2 <sup>nd</sup> expression cassette		
	AD	DBD	LBD	Ligand	RE	Promoter	Gene to be modulated
1 <sup>st</sup> gene modulation	VP16	Gal4	CfEcR (with a	Ligand that	Gal4 RE		

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system			substitution mutation)	binds to CfEcR			
2 <sup>nd</sup> gene modulation system	VP16	LexA	CfEcR (with a substitution mutation)	Ligand that binds to CfEcR	LexA RE		

DBD=DNA binding domain  
 LBD=ligand binding domain

AD=transactivation domain  
 RE=response element

OR

b):

	i) 1 <sup>st</sup> expression cassette			ii) 2 <sup>nd</sup> nuclear receptor LBD	iii) Ligand	iv) 2 <sup>nd</sup> expression cassette		
	AD	DBD	Nuclear receptor LBD			RE	Promoter	Gene to be modulated
1 <sup>st</sup> gene modulation system	VP16	Gal4	CfEcR (with a substitution mutation)	Chimeric RXR	Ligand that binds to CfEcR	Gal4 RE		
2 <sup>nd</sup> gene modulation system	VP16	LexA	CfEcR (with a substitution mutation)	Chimeric RXR	Ligand that binds to CfEcR	LexA RE		

DBD=DNA binding domain  
 LBD=ligand binding domain

AD=transactivation domain  
 RE=response element

OR

c):

	i) 1 <sup>st</sup> expression cassette		ii) 2 <sup>nd</sup> expression cassette		iii) Ligand	iv) 3 <sup>rd</sup> expression cassette		
	DBD	Nuclear receptor LBD	AD	Nuclear receptor LBD		RE	Promoter	Gene to be modulated
1 <sup>st</sup> gene modulation system	Gal4	CfEcR (with a substitution mutation)	VP16	Chimeric RXR	Ligand that binds to CfEcR	Gal4 RE		
2 <sup>nd</sup> gene modulation system	LexA	CfEcR (with a substitution mutation)	VP16	Chimeric RXR	Ligand that binds to CfEcR	LexA RE		

Wherein nuclear receptor LBD of i) or ii) is Group H nuclear receptor LBD.

DBD=DNA binding domain  
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However, Applicants respectfully submit that prosecution of the multiple inducible gene modulation systems, comprising ligand binding domains, DNA binding domains, and transactivation domains, of Group I in the present application is appropriate. Under Patent Office examining procedures, "[i]f the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent inventions" (MPEP 803, Rev. 8, May 1988) (emphasis added). The plurality of multiple inducible gene modulation systems, comprising ligand binding domain, DNA binding domain, and transactivation domain, designated by the Examiner fail to define products with properties so distinct as to warrant separate examination and search.

Likewise, Applicants contend that it is a burden on the Applicants to choose or define only one specific multiple gene modulation system as the Applicants have identified [69 receptors and 247 ligands (69 x 247)=] 17,043 receptor-ligand combinations. Furthermore, the claims encompass multiple gene modulation systems, not just two. Applicants have also designed a triplex of orthogonal receptor-ligand pairs, and from the number of receptor-ligand combinations identified, it is possible to have even more multiple gene modulation systems operable within one cell, tissue or organism.

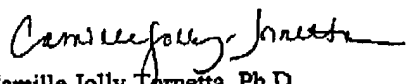
Accordingly, examination of the plurality of inducible gene modulation systems of the present claims involves a fundamental determination of the novelty of multiple inducible gene regulation systems. To the extent that this determination would be made, it is submitted that a preponderantly coextensive search would result. In particular, an exhaustive search for one gene modulation system comprising a DNA binding domain, ligand binding domain, and transactivation domain would encompass other inducible gene modulation systems comprising a DNA binding domain, ligand binding domain and transactivation domain.

Thus, Applicants submit that the search and examination of the plurality of multiple inducible gene regulation systems of the present application can be made without serious burden. Applicants respectfully submit that conjoint examination and inclusion of all of the multiple inducible gene regulation systems of the present application would not present an undue burden on the Examiner, and accordingly, withdrawal of this restriction or reconsideration is believed to be in order.

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In the event that the restriction requirement is maintained, Applicants reserve the right to file divisional applications directed to the subject matter of the non-elected claims of Group II and additional multiple inducible gene regulation systems. If a telephone interview would be of assistance in advancing prosecution of this application, Applicants' agent invites the Examiner to contact her at (610) 650-8734 ext. 104.

Respectfully submitted,

  
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